### IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

- 1-4. (Canceled)
- 5. (Original) A process for preparing a compound of Formula I

$$AnYn = \bigcup_{l} V$$

$$W$$

$$I$$

$$I$$

where each Y is -O or halogen, each Z is -O or halogen, each n is independently the value of 0, 1, 2, 3, 4 or 5, each M is independently the value of 0, 1, 2, 3, 4 or 5, each A is independently selected from  $P_n$ , R or absent, each B is independently selected from H, R or absent, each V is independently selected from  $P_n$ , straight or branched alkyl of from 1 to 6 carbon atoms and cycloalkyl of from 3 to 8 carbon atoms, alkoxy, phenyl, benzyl or halogen, each W is independently selected from H, straight or branched alkyl of from 1 to 6 carbon atoms and cycloalkyl of from 3 to 8 carbon atoms, alkoxy, phenyl, benzyl or halogen, where R is selected from the group alkyl with at least one carbon atom, aryl and aralkyl,  $P_n$  is an alcohol protecting group and diastereoisomers of the foregoing, comprising the step of coupling a benzoyl halide compound of Formula IC

where X is halogen, with a 4-substituted styrene compound of Formula IE

in solution or in suspension of a first solvent, transition metal catalyst, N-heterocyclic carbene-type ligand and a first base.

### 6. (Original) A process for preparing a compound of Formula I

$$AnYn = \bigcup_{U} V \qquad \bigcup_{U} ZmBm$$

where each Y is -O or halogen, each Z is -O or halogen, each n is independently the value of 0, 1, 2, 3, 4 or 5, each M is independently the value of 0, 1, 2, 3, 4 or 5, each A is independently selected from  $P_n$ , R or absent, each B is independently selected from H, R or absent, each V is independently selected from  $P_n$ , straight or branched alkyl of from 2 to 6 carbon atoms and cycloalkyl of from 3 to 8 carbon atoms, alkoxy, phenyl, benzyl or halogen, each W is independently selected from H, straight or branched alkyl of from 1 to 6 carbon atoms and cycloalkyl of from 3 to 8 carbon atoms, alkoxy, phenyl, benzyl or halogen, where each R is independently selected from alkyl with at least two carbon atoms, aryl and aralkyl,  $P_n$  is an alcohol protecting group and diastereoisomers of the foregoing, comprising the step of coupling a benzoyl halide compound of Formula IC

where X is halogen, with a 4-substituted styrene compound of Formula IE

in solution or in suspension of a first solvent, transition metal catalyst, N-heterocyclic carbene-type ligand and a first base.

# 7. (Currently Amended) A process for preparing resveratrol from compounds of Formula 1A3

$$A_1O$$
 $OA_2$ 
 $OA_3$ 
 $OA_2$ 

where  $A_1$  is selected from  $P_1$  and  $(CO)R_1$ ,  $A_2$  is selected from  $P_2$  and  $(CO)R_2$ ,  $A_3$  is selected from  $P_3$  and  $(CO)R_3$ , where  $P_1$  when present is a first alcohol protecting group,  $P_2$  when present is a second alcohol protecting group,  $P_3$  when present is a third alcohol protecting group,  $P_3$  when present are each independently selected from alkyl with at least one carbon atom, aryl, aralkyl, and diastereoisomers of the foregoing, comprising the step or steps:

- (a) reacting said the compounds of Formula 1A3 with a first base in a first solvent; and/or,
- (b) reacting saidthe compounds of Formula  $1\underline{A3}$  with one or more deprotection reactants to remove saidthe alcohol protecting groups  $P_1$ ,  $P_2$  and  $P_3$ .
  - 8. (Canceled)
- 9. (Currently Amended) A process for The method of claim 5, further comprising preparing a compound of Formula 3

$$R_1$$
 OH  $3$ 

pharmaceutically and cosmetically acceptable salts thereof where  $R_1$  is selected from alkyl with at least one carbon atom, aryl, aralkyl, and diastereoisomers of the foregoing, comprising:

- (a) esterifying a first alcohol of resorcylic acid with an acylating agent in solution or in suspension of a first solvent;
- (b) reacting a second alcohol of resorcylic acid with a first alcohol protecting agent in solution or in suspension of a second solvent,

wherein the sequence of steps (a) and (b) are interchangeable, to give the mono-ester, mono-protected alcohol of Formula 3B

$$R_1$$
 O OH OH  $OP_1$ 

where P<sub>1</sub> is a first alcohol protecting group;

(c) halogenating saidthe compound of Formula 3B using a halogenating agent in solution or in suspension of a third solvent to give the acid halide of Formula 3D

where X is halogen;

(d) coupling saidthe compound of Formula 3E with a compound of Formula 3D

where P<sub>2</sub> is a second alcohol protecting group, with transition metal catalyst, N-heterocyclic carbene-type ligand, and a first base in solution or in suspension of a fourth solvent to yield a compound of Formula 3F;

$$R_1 \longrightarrow O$$
 $OP_2$ 
 $OP_1$ 
 $OP_2$ 

- (e) deprotecting saidthe first and second alcohol protecting groups from saidthe compound of Formula 3F to give the compound of Formula 3.
  - 10. (Canceled)
- 11. (Currently Amended) A process for The method of claim 5 further comprising preparing a compound of Formula 4

pharmaceutically and cosmetically acceptable salts thereof where  $R_1$  and  $R_2$  are independently selected from alkyl with at least one carbon atom, aryl, aralkyl, and diastereoisomers of the foregoing, comprising:

(a) esterifying resorcylic acid with an acylating agent in solution or in suspension of a first solvent to give the 3,5-diester of resorcylic acid of Formula 4A;

(b) halogenating saidthe compound of Formula 4a using a halogenating agent in solution or in suspension of a second solvent to give the acid halide of Formula 4C

where X is halogen;

(c) coupling saidthe compound of Formula 4C with a compound of Formula 4D

where P<sub>3</sub> is a first alcohol protecting group, with transition metal catalyst, N-heterocyclic carbene-type ligand, and a first base in solution or in suspension of a third solvent to yield a compound of Formula 4E;

$$R_1$$
  $O$   $OP_1$   $OP_1$   $OP_2$   $OP_3$   $OP_4$   $OP_4$ 

- (d) deprotecting saidthe first alcohol protecting group from saidthe compound of Formula 4E to give the compound of Formula 4.
  - 12. (Canceled)
- 13. (Currently Amended) A process for The method of claim 5 further comprising preparing a compound of Formula 5

$$R_1$$
  $O$   $OH$   $OH$ 

pharmaceutically and cosmetically acceptable salts thereof where  $R_1$  and  $R_3$  are independently selected from alkyl with at least one carbon atom, aryl, aralkyl, and diastereoisomers of the foregoing, comprising:

- (a) esterifying a first alcohol of resorcylic acid with an acylating agent in solution or in suspension of a first solvent;
- (b) reacting a second alcohol of resorcylic acid with a first alcohol protecting agent in solution or in suspension of a second solvent,

wherein the sequence of steps (a) and (b) are interchangeable to give the mono-ester, mono-protected alcohol of Formula 5B

$$R_1$$
 OHO OHO  $OH$   $OH$   $OH$ 

where  $P_1$  is a first alcohol protecting group;

(c) halogenating saidthe compound of Formula 5B using a halogenating agent in solution or in suspension of a third solvent to give the acid halide of Formula 5D

where X is halogen;

(d) coupling saidthe compound of Formula 5D with a compound of Formula 5E

with transition metal catalyst, N-heterocyclic carbene-type ligand, and a first base in solution or in suspension of a fourth solvent to yield a compound of Formula 5F;

$$R_1$$
  $O$   $OR_2$   $OF_1$ 

(e) deprotecting <u>saidthe</u> first and second protecting groups from <u>saidthe</u> compound of Formula 5F to give a compound of <u>saidthe</u> Formula 5.

### 14. (Canceled)

15. (Currently Amended) A process for The method of claim 5 further comprising preparing a compound of Formula 6

pharmaceutically and cosmetically acceptable salts thereof where R<sub>3</sub> is selected from alkyl with at least one carbon atom, aryl, aralkyl, and diastereoisomers of the foregoing, comprising:

(a) esterifying 4-hydroxy styrene with an acylating agent in solution or in suspension of a first solvent to give the 4-ester styrene of Formula 6D;

(b) reacting resorcylic acid with an alcohol protecting agent in solution or in suspension of a second solvent to give a compound of Formula 6B

where P<sub>1</sub> is a first alcohol protecting group and P<sub>2</sub> is a second alcohol protecting group;

(c) halogenating saidthe compound of Formula 6B using a halogenating agent in solution or in suspension of a third solvent to give the acid halide of Formula 6C

where X is halogen;

(d) coupling saidthe compound of Formula 6D with a compound of Formula 6C with transition metal catalyst, N-heterocyclic carbene-type ligand, and a first base in solution or in suspension of a fourth solvent to yield a compound of Formula 6E;

$$P_1O$$
 $OP_2$ 
 $OR_2$ 
 $OR_2$ 
 $OR_2$ 

(e) deprotecting saidthe first alcohol protecting group from saidthe compound of Formula 6E to give the compound of Formula 6.

## 16. (Canceled)

17. (Currently Amended) A process for The method of claim 5 further comprising preparing a compound of Formula 7

$$\begin{array}{c|c} R_1 & O & \\ \hline \\ O & O \\ \hline \\ R_2 & \end{array}$$

pharmaceutically and cosmetically acceptable salts thereof where  $R_1$ ,  $R_2$  and  $R_3$  are independently selected from alkyl with at least one carbon atom, aryl, aralkyl, and diastereoisomers of the foregoing, comprising:

(a) esterifying resorcylic acid with an acylating agent in solution or in suspension of a first solvent to give the 3,5-diester of resorcylic acid of Formula 7A;

(b) halogenating saidthe compound of Formula 7A using a halogenating agent in solution or in suspension of a second solvent to give the acid halide of Formula 7C

where X is halogen;

(c) coupling saidthe compound of Formula 7C with a compound of Formula

with transition metal catalyst, N-heterocyclic carbene-type ligand, and a first base in solution or in suspension of a third solvent.

### 18-54. (Canceled)

- 55. (New) The processes according to claim 5, where the N-heterocyclic carbene-type ligand is selected from imidazolium, 1,3-disubstituted imidazolium, 1,3-disubstituted-4,5-dihydroimidazolium carbene-type ligands.
- 56. (New) The processes according to claim 6, where the N-heterocyclic carbene-type ligand is selected from imidazolium, 1,3-disubstituted imidazolium, 1,3-disubstituted-4,5-dihydroimidazolium carbene-type ligands.
- 57. (New) The processes according to claim 7, where the N-heterocyclic carbene-type ligand is selected from imidazolium, 1,3-disubstituted imidazolium, 1,3-disubstituted-4,5-dihydroimidazolium carbene-type ligands.
- 58. (New) The processes according to claim 5, where the N-heterocyclic carbene-type ligand is N,N'-bis-carbocycle imidazolium ligands.
- 59. (New) The processes according to claim 6, where the N-heterocyclic carbene-type ligand is N,N'-bis-carbocycle imidazolium ligands.
- 60. (New) The processes according to claim 7, where the N-heterocyclic carbene-type ligand is N,N'-bis-carbocycle imidazolium ligands.
- 61. (New) The processes according to claim 5, where the N-heterocyclic carbene-type ligand is selected from N,N'-bis-(2,6-diisopropylphenyl) imidazolium chloride, N,N'-bis-(dimesityl) imidazolium chloride and N,N'-bis-adamantylimidazolium chloride.
- 62. (New) The processes according to claim 6, where the N-heterocyclic carbene-type ligand is selected from N,N'-bis-(2,6-diisopropylphenyl) imidazolium chloride, N,N'-bis-(dimesityl) imidazolium chloride and N,N'-bis-adamantylimidazolium chloride.

63. (New) The processes according to claim 7, where the N-heterocyclic carbene-type ligand is selected from N,N'-bis-(2,6-diisopropylphenyl) imidazolium chloride, N,N'-bis-(dimesityl) imidazolium chloride and N,N'-bis-adamantylimidazolium chloride.

64. (New) The processes according to claims 5, where the transition metal catalyst is a Pd II catalyst selected from the group consisting of: Pd(OAc)<sub>2</sub>, PdBr<sub>2</sub>, and PdCl<sub>2</sub>.

65. (New) The processes according to claims 6, where the transition metal catalyst is a Pd II catalyst selected from the group consisting of: Pd(OAc)<sub>2</sub>, PdBr<sub>2</sub>, and PdCl<sub>2</sub>.

66. (New) The processes according to claims 7, where the transition metal catalyst is a Pd II catalyst selected from the group consisting of: Pd(OAc)<sub>2</sub>, PdBr<sub>2</sub>, and PdCl<sub>2</sub>.

67. (New) The method of claim 5, wherein R is selected from the group alkyl with at least two carbon atoms.

68. (New) The method of claim 6, wherein R is selected from the group alkyl with at least two carbon atoms.

Respectfully submitted,

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